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The Apollo-Soyuz Test Project

*T*he Apollo-Soyuz Test Project (ASTP) in 1975 was the first joint American-Soviet space mission and, as expected, most of the world focused on its political dimensions. The Marshall Center role, however, focused on engineering and science. For example, Marshall provided the Saturn IB launch vehicle for the Apollo portion of the mission. In addition, Marshall scientists gathered data from the results of experiments and demonstrations conducted in the unique environment of space.

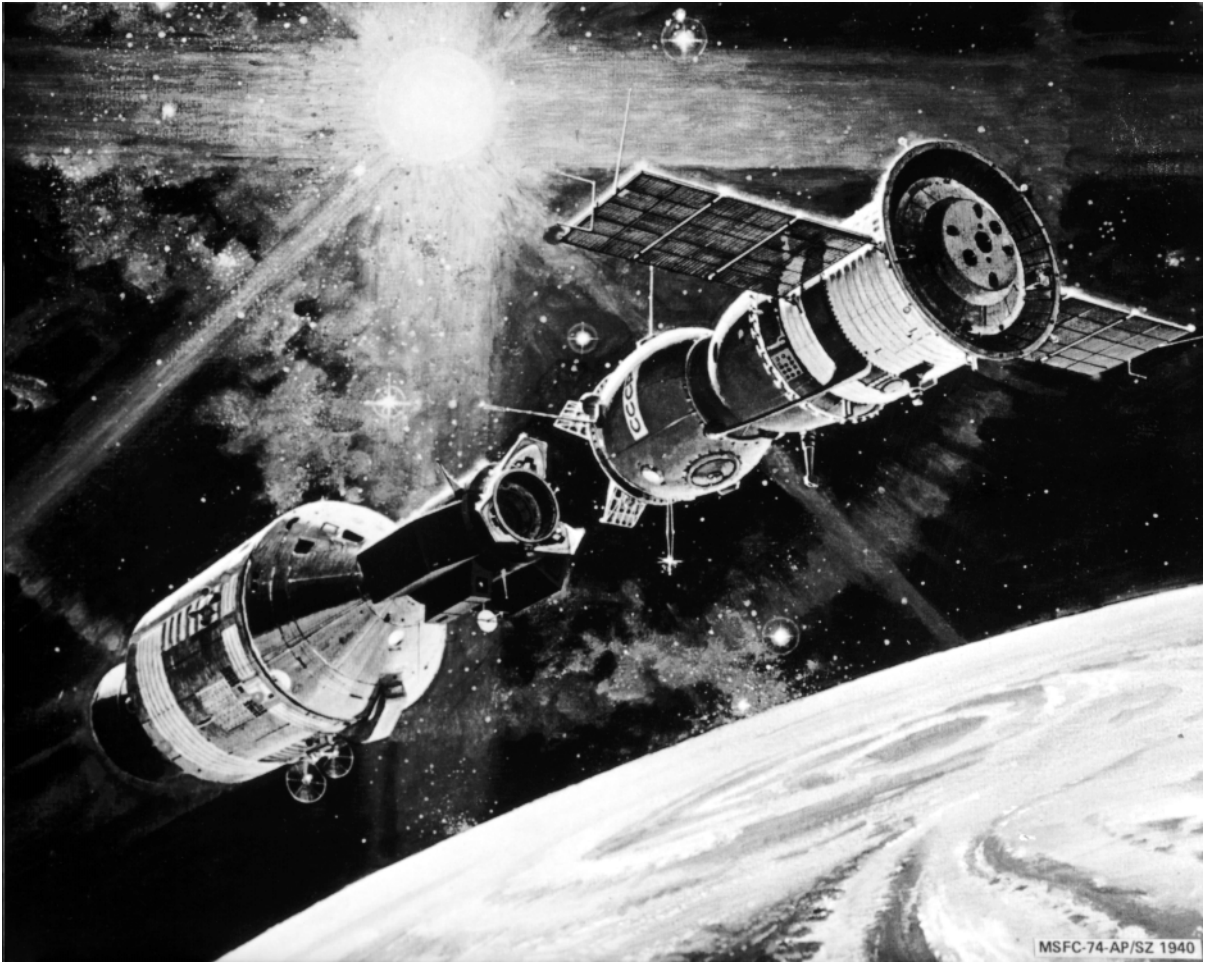
The principal objective of the Apollo-Soyuz Test Project was to test compatible rendezvous and docking systems that were being developed for future United States and Soviet manned spacecraft and stations. The project was carried out under an agreement signed in 1972 by President Richard Nixon and Chairman Aleksey Kosygin.

Five years of technical cooperation among engineers in the United States and the Soviet Union led to the development of the international docking module, and agreements on mission operations, flight control, means for life support, communications, tracking, safety and crew procedures. Astronauts and cosmo-

nauts trained together in preparation for 2 days of joint activities on their docked spacecraft, each group becoming familiar with the other's spacecraft, flight procedures, and language.

On July 15, 1975, the Russian Soyuz spacecraft lifted off from its launch pad at a Soviet launch site. The spacecraft carried Cosmonauts Alexei Leonov and Valeriy Kubasov. Seven and one-half hours after the Soyuz launch, the U.S. Apollo spacecraft was launched with its crew of Thomas Stafford, Vance Brand, and Donald "Deke" Slayton. Rendezvous and docking of the two ships were accomplished on July 17. The ships remained docked for 2 days, conducting joint experiments and exchanging national mementos.

The Saturn IB for the mission was the last Saturn to be launched. Marshall officials said later that the successful performance of the Saturn IB for the mission was another indication of the launch vehicle's reliability since the first and second stages of the vehicle had been built in 1967. Both were taken out of storage for the mission for continuous preflight checkouts and monitoring prior to the actual launch.



This artist's rendition shows the Apollo and Soyuz spacecrafts about to rendezvous in high Earth orbit as part of the Apollo/Soyuz Test Project in 1975. This was the first international meeting in space between two countries.

The science team for the Apollo-Soyuz Test Project included principal investigators from Marshall as well as scientists from industry and education who were under contract to the Center. A Marshall-managed electric furnace for the ASTP performed perfectly after resolution of an early cool-down problem. Seven materials processing experiments were conducted in the furnace.